

REMARKS

Applicants amend claims 1 and 2. Upon entry of this amendment, claims 1-5 are presented for examination, of which claim 1 is independent. Applicants respectfully submit that claims 1-5 define over the art of record.

I. Telephone Interview and Claim Amendment

Applicants thank the Examiner for the courtesy of a telephone interview conducted on June 13, 2007.

During the interview, Applicants explained the present application to the Examiner with reference to Figures 1 and 2, and argued that the coolant flow passage of the present application is patentably distinct over the coolant flow passage of the cited Shimotori reference. Applicants specifically argued to the Examiner that the Shimotori reference does not teach that the first and second separators have a coolant flow passage formed along the surfaces of the first and second separators between the first separator of one unit cell and the second separator of an adjacent unit cell.

In response, the Examiner is of the opinion that the claims read on the Shimotori reference because the claims do not define the term “surfaces” or “along” specifically. The Examiner indicated that the surface of the through holes for the coolant flow passage in the Shimotori reference corresponds to the surface of the separators for the coolant flow passage in the present invention, and hence the coolant flows along this surface.

Applicants therefore discussed the possibility of amending the claims to specify the coolant flow passage in more detail. The Examiner noted that she would consider the amendments when presented.

Based on the discussion with the Examiner, Applicants amend claim 1 to define the surfaces of the separators that form the coolant flow passage. Applicants also amend claim 2 to specify that the coolant flow passage is in fluid communication with the coolant supply passage and the coolant discharge passage. Support for the amendment can be found throughout the application and at least Figs. 1-2 and corresponding descriptions in the specification. No new matter is added.

II. Specification

Applicants amend the specification to address minor informalities. For example, the reference character for the cathode is changed to “30” at page 16. No new matter is added.

III. Claim Rejection Under 35 U.S.C. §102 and §103

Claims 1-5 are rejected under 35 U.S.C. §102(e) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over United States Patent No. 6,492,055 to Shimotori *et al.* (hereafter “Shimotori”). Applicants respectfully traverse the rejection.

Applicants respectfully submit that the Shimotori reference does not teach or suggest that “a coolant flow passage is formed along a *substantial portion* of said second surface of said first separator and said second surface of said second separator such that a coolant flows along the *substantial portion* of said second surface of said first separator and said second surface of said second separator while a direction in which said reactant gas flows crosses a direction in which said coolant flows (emphasis added),” as recited in amended claim 1.

The Examiner refers to the Shimotori reference, Figure 10a, number 15 as teaching the coolant passage of the present application. (Office Action, pages 3 and 5). Applicants respectfully disagree.

The Shimotori reference teaches coolant passages 15 that penetrate unit cells such that a coolant flows through the unit cells in the stacking direction. The Shimotori reference, however, does not teach any coolant passages formed along a substantial portion of the surface of the separators such that a coolant flows along the substantial portion of the surface of the separators.

The Examiner also refers to the Shimotori reference, Figures 27b and 28b, number 102b as teaching the coolant passage of the present application. (Office Action, page 3). Figures 27b and 28b of the Shimotori reference depict a front end plate 100a and a rear end plate 100b of a fuel cell stack, respectively. The Shimotori reference teaches that the front end plate 100a and the rear end plate 100b include coolant passages 102b. The front end plate 100a and the rear end plate 100b, however, are not separators.

Applicants respectfully submit that the Shimotori reference does not teach or suggest each and every element and limitation of claim 1. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of independent claim 1.

Furthermore, Applicants respectfully submit that the Shimotori reference does not teach or suggest that “the coolant supply passage is in fluid communication with the coolant discharge passage through the coolant flow passage,” as recited in amended claim 2.

In claim 2, a coolant supply passage and a coolant discharge passage extend through two parallel side portions of the first and second separators in the stacking direction, and the coolant supply passage is in fluid communication with the coolant discharge passage through the coolant flow passage. The Shimotori reference does not teach the coolant flow passage of the present application through which the coolant supply passage is in fluid communication with the coolant discharge passage.

Applicants note that the other dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claims also define over the art of record.

IV. Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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